

[0035] Thus, the present invention is well adapted to carry out the object and advantages mentioned as well as those which are inherent therein. While numerous changes may be made by those skilled in the art, such changes are encompassed within the spirit of this invention as defined by the appended claims.

[0036] What is claimed is:

1. Apparatus for preventing rotation of a cementing plug during drillout after cementing operations, the apparatus comprising:

an outer housing;

an inner sleeve disposed in the outer housing, the inner sleeve having open upper and lower ends, wherein an inner surface of the inner sleeve curves radially inwardly from the upper end of the inner sleeve, so that the inner sleeve will cause an interference fit with the cementing plug when the cementing plug is received therein.

2. The apparatus of claim 1, wherein the sleeve defines an innermost diameter between the upper and lower ends, wherein the inner surface of the inner sleeve diverges radially outwardly in both upward and downward directions from the innermost diameter.

3. The apparatus of claim 1, wherein the inner surface generally defines an hourglass shape.

4. The apparatus of claim 1, wherein the inner sleeve is adapted to receive at least two cementing plugs, wherein the inner sleeve will frictionally engage both of the cementing plugs to limit rotation of the cementing plugs during drillout thereof.

5. The apparatus of claim 1, the inner sleeve having multiple curvatures on the inner surface thereof.

6. The apparatus of claim 5, the inner surface generally defining an hourglass shape.

7. Apparatus for preventing rotation of a cementing plug during drillout of the cementing plug after cementing operations comprising an inner sleeve for insertion into the casing, the inner sleeve having upper and lower ends, an inner surface of the sleeve having multiple curvatures thereon.

8. Apparatus of claim 7, wherein the inner surface of the inner sleeve defines an hourglass shape.

9. Apparatus of claim 7, wherein the inner surface diverges radially outwardly from an innermost diameter upwardly and downwardly.

10. Apparatus of claim 7, wherein the inner surface curves radially inwardly from both the upper and lower ends of the sleeve.

11. Apparatus of claim 7, wherein the inner surface of the sleeve diverges radially outwardly from multiple locations between the upper and lower ends of the sleeve.

12. Apparatus for preventing rotation of a cementing plug during drillout of the cementing plug after cementing operations comprising:

an outer sleeve for connecting in a casing string;

an inner sleeve affixed to the outer housing, the inner sleeve having multiple curvatures on an inner surface thereof, wherein the cementing plug is received in the inner sleeve.

13. The apparatus of claim 12, the inner sleeve having a length such that two cementing plugs may be received therein.

14. The apparatus of claim 12, wherein the inner surface of the inner sleeve has an hourglass shape.

15. The apparatus of claim 12, wherein the inner surface converges from both an upper and lower end of the inner sleeve.